*Via Facsimile: (703) 872-9306*

9D-HR-19236
PATENT

IN THE CLAIMS

1-15. (canceled)

16. (currently amended) A quick chill and thaw system for a refrigerator including a first compartment at a first temperature and a second compartment at a second temperature, said quick chill and thaw system comprising:

a pan; ~~and~~

an air handler comprising an air supply flow path ~~and~~, a fan ~~for drawing~~ positioned to move air through said air supply flow path from the first compartment and into said pan, ~~and~~ a return flow path ~~for returning~~ configured to return air from said pan to the first compartment, and a heater element positioned to warm air that passes through said air handler; and

a duct member adapted for establishing flow communication between said air supply flow path and an air supply, wherein said air supply comprises a freezer compartment.

17. (previously presented) A quick chill and thaw system in accordance with Claim 16 further comprising a re-circulation path for mixing air from said pan with air in said air supply flow path.

18. (original) A quick chill and thaw system in accordance with Claim 16 wherein said air handler is configured to deliver air into said pan from above and behind said pan.

19. (canceled)

20. (original) A quick chill and thaw system in accordance with Claim 16 wherein at least one of said pan and said air handler comprises a light source for illuminating said pan.

21. (original) A quick chill and thaw system in accordance with Claim 16 wherein said pan comprises a sliding cover.



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22. (currently amended) A quick chill and thaw system in accordance with Claim 16 wherein said pan is configured for slide-out access ~~thereto~~.

23. (canceled)

24. (original) A quick chill and thaw system in accordance with Claim ~~23~~ 16 wherein said duct member comprises a supply duct and a return duct.

25. (canceled)

26. (currently amended) A quick chill and thaw system in accordance with Claim ~~23~~ 16 further comprising an adapter for establishing flow communication between said air supply and said duct member, said adapter ~~apportioning~~ configured to apportion a percentage of said flow communication to said air handler supply airflow path.

27. (currently amended) A quick chill and thaw system in accordance with Claim ~~24~~ 26 wherein said percentage is about 40%.

28. (currently amended) A quick chill and thaw system in accordance with Claim 16 further comprising a tray in said pan ~~for improving airflow therein~~.

29. (original) A quick chill and thaw system in accordance with Claim 28 wherein said tray includes markers for placement of items on said tray.

30. (original) A quick chill and thaw system in accordance with Claim 16 further comprising a rack for positioning items within said pan.

31. (original) A quick chill and thaw system in accordance with Claim 30 wherein said rack comprises a chill side and a thaw side.

32. (original) A quick chill and thaw system in accordance with Claim 16 wherein said air handler is adapted for rapid chilling and refrigerated thawing of items placed in said pan.



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33. (currently amended) A quick chill and thaw system in accordance with Claim 32 wherein said air handler is operable in a chill mode, said air handler ~~moving~~ configured to move air at a temperature of about 21°F in said chill mode.

34. (currently amended) A quick chill and thaw system in accordance with Claim 32 wherein said air handler is operable in a thaw mode, said air handler ~~moving~~ configured to move air at a temperature and velocity that maintains a surface temperature of a thawed item ~~within acceptable limits~~ in a refrigerated state.

35. (currently amended) A quick chill and thaw system in accordance with Claim 34 wherein said air temperature is between about 40°F to about 50°F.

36. (original) A quick chill and thaw system in accordance with Claim 35 wherein said air temperature is about 41°F.

37. (original) A quick chill and thaw system in accordance with Claim 34 wherein said air handler is operable in said thaw mode for a selected period of time.

38. (withdrawn) A refrigerator comprising:

a fresh food storage compartment;

a freezer storage compartment;

a mullion wall separating said fresh food storage compartment and said freezer storage compartment;

a pan mounted in one of said fresh food compartment and said freezer compartment; and

an air handler mounted in one of said fresh food compartment and said freezer compartment and placed in flow communication with the other of said fresh food and freezer compartment through said mullion wall and further in flow communication with said pan, said

air handler adapted for producing convective airflow within said pan at a decreased temperature relative to a temperature of said fresh food compartment when in a quick chill mode, and an increased temperature relative to said temperature of said fresh food compartment when in a thaw mode.

39. (withdrawn) A refrigerator in accordance with Claim 38 wherein said pan is mounted in said refrigerator compartment.

40. (withdrawn) A refrigerator in accordance with Claim 39 wherein said pan is mounted in a bottom portion of said fresh food compartment.

41. (withdrawn) A refrigerator in accordance with Claim 38 wherein said air handler is mounted in said fresh food compartment.

42. (withdrawn) A refrigerator in accordance with Claim 41 wherein said air handler is substantially horizontally mounted.

43. (withdrawn) A refrigerator in accordance with Claim 42 wherein said air handler is configured to deliver air into said pan from above and behind said pan.

44. (withdrawn) A refrigerator in accordance with Claim 38 wherein said air handler comprises an air supply flow path and a fan for discharging air into said pan.

45. (withdrawn) A refrigerator in accordance with Claim 44 wherein said air handler further comprises a return flow path for returning air from said pan through said mullion wall.

46. (withdrawn) A refrigerator in accordance with Claim 45 further comprising a re-circulation path for mixing air from said pan with air in said supply flow path.

47. (withdrawn) A refrigerator in accordance with Claim 45 wherein said supply flow path is positioned between said return path and said re-circulation path.

48. (withdrawn) A refrigerator in accordance with Claim 38 wherein said pan comprises a slide-out pan.

49. (withdrawn) A refrigerator in accordance with Claim 48 wherein said pan comprises a sliding cover.

50. (withdrawn) A refrigerator in accordance with Claim 38 further comprising a vane for dispersing air from said air handler within said pan.

51. (withdrawn) A refrigerator in accordance with Claim 38 wherein at least one of said pan and said air handler comprises a light source for illuminating said pan.

52. (withdrawn) A refrigerator in accordance with Claim 38 further comprising a plenum extension in flow communication with said air handler for distributing air within said pan.

53. (currently amended) A quick chill and thaw system for a refrigerator including a fresh food compartment, said quick chill and thaw system comprising:

a pan positioned within the fresh food compartment, wherein the fresh food compartment is at a first temperature; ~~and~~

an air handler in flow communication with said pan, and

~~said air handler including~~ a heater element ~~and configured for discharging~~ positioned such that air ~~into~~ entering said pan is at ~~an increased~~ a temperature ~~relative to a fresh food compartment temperature~~ greater than the first temperature.

54. (currently amended) A quick chill and thaw system in accordance with Claim 53 wherein said air handler is configured for discharging air at a temperature and velocity to maintain a surface temperature of a thawed item ~~within acceptable limits~~ in a refrigerated state.

55. (currently amended) A quick chill and thaw system in accordance with Claim 54 wherein said air temperature is between about 40°F to about 50°F.

56. (original) A quick chill and thaw system in accordance with Claim 55 wherein said air temperature is about 41°F.

57. (original) A quick chill and thaw system in accordance with Claim 54 wherein said surface temperature is about 41°F.

58. (original) A quick chill and thaw system in accordance within Claim 53 wherein said air handler further comprises an air supply flow path and a return flow path.

59. (currently amended) A quick chill and thaw system in accordance with Claim 58 further comprising a damper element in flow communication with ~~sad~~ said supply flow path and said return flow path.

60. (original) A quick chill and thaw system in accordance with Claim 58 further comprising a re-circulation flow path for mixing of air in said air supply flow path with air from said re-circulation path.

61. (original) A quick chill and thaw system in accordance with Claim 60 wherein said supply flow path is positioned between said return flow path and said re-circulation flow path.

62. (original) A quick chill and thaw system in accordance with Claim 53 wherein said heater element is a foil-type heater element.

63. (original) A quick chill and thaw system in accordance with Claim 53 further comprising a plenum extension for distributing air within said pan.

64. (currently amended) A quick chill and thaw system for a refrigerator comprising:

a pan;

an air handler adapted for producing convective airflow within said pan; and

a rack inside said pan for positioning items placed therein, wherein said rack comprises a chill side and a thaw side.

65. (canceled)

66. (currently amended) A quick chill and thaw system in accordance with Claim ~~65~~ 64 wherein each of said chill side and said thaw side comprises a plurality of longitudinal members configured to orient food and beverage items ~~at optimal positions~~ in said pan.

67. (original) A quick chill and thaw system in accordance with Claim 66 wherein said longitudinal members are straight.

68. (currently amended) A quick chill and thaw system in accordance with Claim 66 wherein said longitudinal members are at least partially curved.

69. (original) A quick chill in thaw system in accordance with Claim 66 wherein said rack includes first and second ends, said longitudinal members extending non-linearly between said first and second ends.

70. (original) A quick chill and thaw system in accordance with Claim 64 further comprising a tray within said pan, said rack removably positioned on said tray.

71. (original) A quick chill and thaw system in accordance with Claim 70 wherein said tray is removable from said pan.

72. (original) A quick chill and thaw system in accordance with Claim 70 wherein said tray further comprises a handle.

73. (withdrawn) A refrigerator including a first compartment and a quick chill and thaw system located in the first compartment, said quick chill and thaw system comprising:

a pan; and

an air handler comprising an airflow path comprising an air supply path and a return path, and a fan for drawing air through from said airflow path into said pan and from said pan into said airflow path.

74. (withdrawn) A quick chill and thaw system in accordance with Claim 73 further comprising a re-circulation path for mixing air from said pan with air in said air supply flow path.

75. (withdrawn) A quick chill and thaw system in accordance with Claim 73 wherein said air handler further comprises a heater element for warming air inside said air handler.

76. (withdrawn) A quick chill and thaw system in accordance with Claim 73 wherein at least one of said pan and said air handler comprises a light source for illuminating said pan.

77. (withdrawn) A quick chill and thaw system in accordance with Claim 73 wherein said air handler is adapted for rapid chilling and refrigerated thawing of items placed in said pan.

78. (withdrawn) A quick chill and thaw system in accordance with Claim 77 wherein said air handler is operable in a chill mode, said air handler moving air at a temperature of about 21°F in said chill mode.

79. (withdrawn) A quick chill and thaw system in accordance with Claim 77 wherein said air handler is operable in a thaw mode, said air handler moving air at a temperature and velocity that maintains a surface temperature of a thawed item within acceptable limits.

80. (withdrawn) A quick chill and thaw system for a refrigerator including a food storage compartment, said quick chill and thaw system comprising:

a pan; and

an air handler in flow communication with said pan, said air handler comprising a heater element and configured for maintaining a substantially constant temperature within said pan in a thawing operation.

81. (withdrawn) A quick chill and thaw system in accordance with Claim 80 wherein said air handler is configured for discharging air at a temperature and velocity to maintain a surface temperature of a thawed item within acceptable limits.

82. (withdrawn) A quick chill and thaw system in accordance with Claim 81 wherein said air temperature is about 40°F to about 50°F.

83. (withdrawn) A quick chill and thaw system in accordance within Claim 80 wherein said air handler further comprises an air supply flow path and a return flow path.

84. (withdrawn) A quick chill and thaw system in accordance with Claim 83 further comprising a damper element in flow communication with sad supply flow path and said return flow path.

85. (withdrawn) A quick chill and thaw system in accordance with Claim 83 further comprising a re-circulation flow path for mixing of air in said air supply flow path with air from said re-circulation path.

86. (withdrawn) A quick chill and thaw system for a refrigerator including a fresh food compartment, said quick chill and thaw system comprising:

a pan; and

an air handler in flow communication with said pan, said air handler comprising a flow path comprising a supply path and a return path, and a heater element located in said airflow path.

87. (withdrawn) A quick chill and thaw system in accordance with Claim 86 wherein said air handler is configured for discharging air at a temperature and velocity to maintain a surface temperature of a thawed item within acceptable limits.

88. (withdrawn) A quick chill and thaw system in accordance with Claim 87 wherein said air temperature is about 40°F to about 50°F.

89. (withdrawn) A refrigerator comprising:

a fresh food storage compartment;

a freezer storage compartment;

a pan mounted in one of said fresh food compartment and said freezer compartment; and

an air handler mounted in one of said fresh food compartment and said freezer compartment and placed in flow communication with the other of said fresh food and freezer compartment and further in flow communication with said pan, said air handler adapted for producing convective airflow at a decreased temperature relative to a temperature of said fresh food compartment when in a quick chill mode, and at an increased temperature relative to said temperature of said fresh food compartment when in a thaw mode.

90. (withdrawn) A refrigerator in accordance with Claim 89 wherein said pan is mounted in said refrigerator compartment.

91. (withdrawn) A refrigerator in accordance with Claim 89 wherein said air handler is mounted in said fresh food compartment.

92. (withdrawn) A refrigerator in accordance with Claim 89 wherein said air handler comprises an air supply flow path and a fan for discharging air into said pan.

93. (withdrawn) A refrigerator in accordance with Claim 89 further comprising a vane for dispersing air from said air handler within said pan.

94. (withdrawn) A refrigerator in accordance with Claim 89 further comprising a plenum extension in flow communication with said air handler for distributing air within said pan.

95. (new) A quick chill and thaw system in accordance with Claim 16 wherein said heater is positioned within said air handler.

96. (new) A quick chill and thaw system for a refrigerator including a fresh food compartment, said quick chill and thaw system comprising:

a pan positioned within the fresh food compartment, wherein the fresh food compartment is at a first temperature;

an evaporator in flow communication with said pan; and

a heater element positioned such that air entering said pan is at a temperature greater than the first temperature.